AMENDMENTS TO THE CLAIMS

1 through 10. (Cancelled)

11. (Previously Presented) The inertial sensor according to claim 23 wherein said signal conditioning circuits are integral with said silicon wafer and said linear acceleration sensor.

12. (Previously Presented) The inertial sensor according to claim 11 including a device for combining signals connected to said signal conditioning circuits, said device operable to combine the signals generated by said plurality of signal conditioning circuits into a single output signal.

13. (Previously Presented) The inertial sensor according to claim 23 wherein said signal conditioning circuits are located remotely from said silicon wafer and said linear acceleration sensor.

14. (Currently Amended) An inertial sensor adapted to be attached to a body comprising:

a base member, said base member being formed from a silicon wafer;

a single inertial sensor element disposed on said base member, said inertial sensor element operable to sense a change in a specific motion parameter of said body; and

a plurality of signal conditioning circuits connected to said inertial sensor element, with a first one of said signal conditioning circuits being calibrated to sense a first range of change in said specific body motion parameter and a second one of said signal conditioning circuits being calibrated to sense a second range of change in said same specific body motion parameter, said second range of change in said body motion parameter being different from said first range of change in said body motion parameter, said signal conditioning circuits adapted to be connected to at least one control system, said signal conditioning circuits operable to generate a plurality of electrical signals with

each [[an]] electrical signal ~~that is~~ being a function of said change in said specific body motion parameter while also being within the calibration range associated with said signal conditioning circuit.

15. (Previously Presented) The inertial sensor according to claim 22 wherein said signal conditioning circuits are integral with said silicon wafer and said angular rate sensor.

16. (Previously Presented) The inertial sensor according to claim 15 including a device for combining signals connected to said signal conditioning circuits, said device operable to combine the signals generated by said plurality of signal conditioning circuits into a single output signal.

17. (Previously Presented) The inertial sensor according to claim 22 wherein said signal conditioning circuits are located remotely from said silicon wafer and said angular rate sensor.

18 and 19. (Cancelled)

20. (Currently Amended) The inertial sensor according to claim [[12]] 13 wherein said signal conditioning circuits are included within an Application Specific Integrated Circuit.

21. (Currently Amended) The inertial sensor according to claim [[16]] 22 wherein said signal conditioning circuits are included within an Application Specific Integrated Circuit.

22. (Currently Amended) [[The]] An inertial sensor ~~according claim 14 wherein~~ adapted to be attached to a body comprising:

a base member, said base member being formed from a silicon wafer;

~~said inertial sensor element is an~~ a single angular rate sensor disposed on said base member, said angular rate sensor operable to sense a change in ~~and further wherein said body motion parameter is~~ an angular velocity of said body; and

a plurality of signal conditioning circuits connected to said angular rate sensor, with a first one of said signal conditioning circuits being calibrated to sense a first range of angular velocity change and a second one of said signal conditioning circuits being calibrated to sense a second range of angular velocity change, said second range of angular velocity change being different from said first range of angular velocity change, said signal conditioning circuits adapted to be connected to at least one control system, said signal conditioning circuits operable to generate an electrical signal that is a function of said change in said angular velocity of said body.

23. (Previously Presented) The inertial sensor according claim 14 wherein said inertial sensor element is a linear acceleration sensor and further wherein said body motion parameter is a linear velocity.

24. (Previously Presented) The inertial sensor according claim 14 including a device for combining signals connected to said signal conditioning circuits, said device operable to combine the signals generated by said plurality of signal conditioning circuits into a single output signal.

25. (New) The inertial sensor according to claim 13 including a device for combining signals connected to said signal conditioning circuits, said device operable to combine the signals generated by said plurality of signal conditioning circuits into a single output signal.

26. (New) The inertial sensor according to claim 22 including a device for combining signals connected to said signal conditioning circuits, said device operable to

combine the signals generated by said plurality of signal conditioning circuits into a single output signal.